GrummanWorld

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Prowler To Be Armed With HARM Missile

Grumman's electronic warfare Prowler is getting a new knockout punch: the HARM missile.

Under an 18-month, $20 million contract with the Navy, Grumman is managing the adaptation of the High-speed Anti-Radiation Missile (HARM) to the EA-6B Prowler.

The Navy's investment in the Grumman Prowler will cover the purchase of HARM control panels manufactured by Texas Instruments, retrofitting the HARM system in eight fleet aircraft by Grumman and training and support from Grumman Integrated Logistics Support, in addition to the integration program.

The Navy currently has two aircraft carriers — *Kennedy* and *Ranger* — which carry Grumman aircraft only. Since the Navy's A-7 and F/A-18 aircraft are the only planes now capable of firing HARM missiles, the two carriers won't be without the valuable missiles when the HARM-capable Prowlers join the fleet. Grumman's A-6 Intruder will get HARM capability later.

"Even when the A-7 shoots a HARM," says Bob Scholly, EA-6B program deputy director for Development, "the EA-6B flies alongside, monitoring the target signal and sending information to the A-7 to target the missile."

The Cat's Got Claws. *This Grumman Prowler is armed with a HARM missile. All electronic warfare Prowlers will eventually be capable of carrying these high speed anti-radition missiles. (Photo by Karl Thoma)*

When they support a strike force on a mission Prowlers electronically blind the enemy's radars and surface-to-air missile tracking systems. Now, with HARM, they can destroy the radar.

"The role of HARM is defense suppression...like jamming," Scholly explains. "When it's being jammed by the Prowler, the enemy leaves its radar on, trying to see through the jamming. Such a tactic makes it vulnerable to the missile." While the enemy radar station is blindly groping to find attackers hidden in an electronic blizzard, the Prowler can turn loose a HARM, which uses the signal to lead it to the station.

Altough the EA-6B could carry as many as four missiles, in most scenarios it will carry only two. The reason: For each HARM, a Prowler takes on a mission, it must leave one of its jamming pods on the carrier. That limits the number of different signals it can jam.

Adapting the HARM to the Prowler was easy. The major part was the installation of the HARM control panel, which allows the Prowler's AYK-14 mission computer and ALQ-99 tactical jamming system to "talk" to the missile. A few changes were made to the Prowler's computer software, then some wiring and circuit breakers were installed.

From contract to deployment will take 18 months. One reason the program moved so quickly is that many of the aerodynamic and installation problems had been solved by the A-6 program.

An EA-6B is now going through a 10-week test program at Naval Air Station China Lake, California, and will end with four firings of the missiles. Once the test program is complete, the HARM will be added to the two Prowler squadrons going aboard the *Kennedy* and *Ranger*.

An interim HARM capability will be available in all ICAP (Increased Capability) II Prowlers. The interim capability does not utilize all of the missile's modes of target tracking.

The first production ICAP-II Prowlers able to fire HARM in all its modes will be manufactured in Calvertion in 1988. Older ICAP I Prowlers will have the HARM system installed when they are brought back to Grumman to be upgraded to the ADVCAP (Advanced Capability) configuration — the fifth generation EA-6B — in the 1990s. ■

He's In Control. *In a room below the tower, on the fourth floor of Building 7 in Calverton, Gerry Gibbons watches the airspace above and around Long Island during flight tests. Since tests usually take place outside the civilian traffic routes, his big concern is other military craft in the area. He's got to make sure other planes don't get near the Grumman craft. If they do, he warns the Grumman pilots. A rescue helicopter and chase plane are airborne, too. (Photo by Jim Wagner)*

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Navy: Competition Opens Doors To Opportunity

Assistant Secretary of Navy addresses fourth annual Grumman Procurement Supplier Seminar on L.I.

At the fourth annual Procurement Supplier Seminar, Assistant Secretary of the Navy Everett Pyatt praised Grumman and its suppliers for their part in the recent U.S. initiatives against Libya.

"Much of what was used by the Navy was Grumman equipment which many of the suppliers furnished components for," said Pyatt. "It all worked and that's a tribute to you and your people who put it all together."

Competition was the underlying theme at the April 21 event that drew 150 Grumman suppliers to the Garden City Hotel on Long Island.

"We've been working very hard on competition at both the systems and the spare parts levels," Pyatt said. "We believe this will result in the very best product for the Navy at the best price."

The assistant secretary pointed out that suppliers are being offered new opportunities. A new Navy initiative seeks to produce lower cost weapons systems by obtaining competition in all phases of procurement.

In 1981, 25 percent of the Navy's procurement spending was competitive; that grew to 45 percent last year. This year, the Navy's goal is to make 51 percent of procurement spending competitive.

Pyatt believes that competition actually opens doors that will lead to new business. "It seems that every time we embark on a competitive program, people begin to worry about how they can either retain a contract they have or obtain one they don't have," he said.

"Although competition is the newest thrust in military procurement, Grumman can never allow competition to become a percentage game," Bob Simon, vice president of Corporate Procurement Operations, told the subcontractors. He believes that engaging in statistically wholesale competition can easily lead to disaster.

However, Simon conceded that "the surest way to price yourself out of the ballpark is to have no competition between suppliers. The answer lies in a moderate approach that requires hard business judgment."

Simon continued, "We are not going to ask our suppliers to compete against each other just to build statistics. We believe that the supplier who controls costs and delivers quality products on time should not be forced to compete for that work.

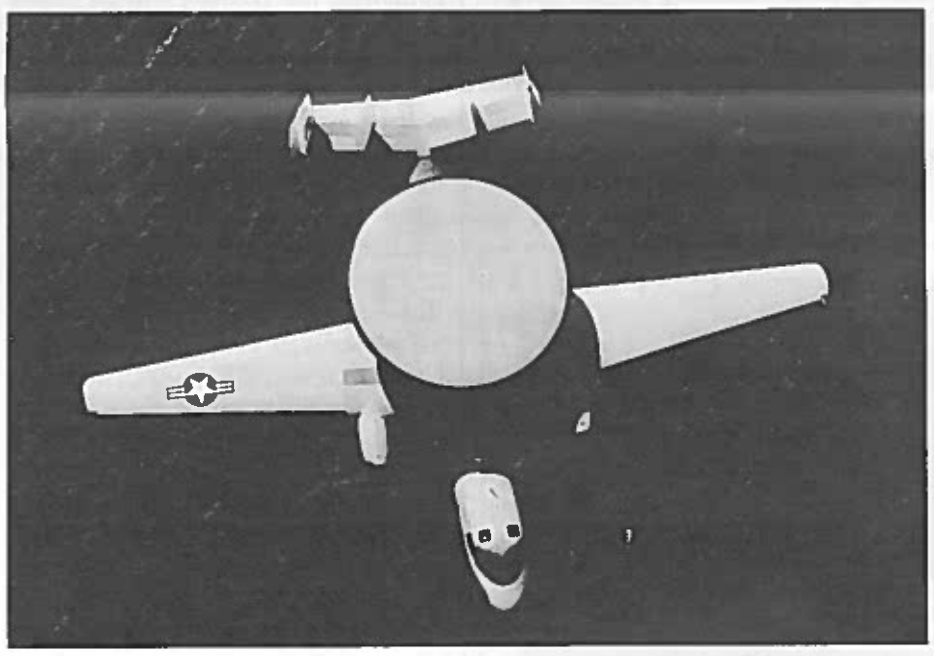
Sharing Ideas. *At the fourth annual supplier seminar, Bob Simon, vice president of Corporate Procurement Operations talks with Al Maiola (L), president of Aero Hardware and Parts, Inc. of Rye, N.Y. (Photo by Bob Settles)*

It makes good business sense.

"We want suppliers to continue to hold their price line," said Simon. "We'd like to see them lower their prices on a voluntary basis rather than force us into putting work up for bids. We'd rather stay with current suppliers than switch to new ones — experience is an important factor."

This year Grumman and other major government contractors have been under great pressure imposed by the Gramm-Rudman Act. Simon indicated that the law probably won't affect Grumman's 1986 contracts, but Grumman plans to purchase $2 billion in goods and services in 1986. This $600 million increase over last year's $1.4 billion figure is primarly due to the $1.1 billion contract to produce Long Life Vehicles for the U.S. Postal Service.

When discussing cost control of major aircraft programs in fiscal year 1985, Simon praised suppliers for their participation in producing positive results. The four major programs in 1985 experienced a 1.5 percent decrease in total material costs. One economic factor which led to this performance was the low level of inflation. However, supplier cost control was the main factor. ■



SEA-nic View. *With Grumman test pilots Dave Seeman and Julius Longshore at the controls, E-2C No. 34 flew over the Atlantic Ocean just off the Long Island shoreline on its way to Calverton. This Hawkeye is equipped with two, more powerful Allison turboprop engines. Before being turned over to the Navy for evaluation, it will be tested by Grumman at Calverton. (Photo by Larry Van Wallendael)*

More Power For Hawkeye: New Engine Being Tested

On April 24, E-2C No. 34 took off for Calverton powered by two new, higher horsepower Allison turboprop engines. The engines will give Hawkeyes better fuel consumption, more power for takeoffs, and a faster rate of climb.

"All Hawkeyes will have this engine eventually, but that will only begin to happen over the next couple of years," says E-2C Program Vice President Jim Philbin. "First we have to go through the development and demonstration program."

Grumman E-2C project pilot Dave Seeman flew the re-engined avionics test aircraft on its 25-minute maiden flight. He and test pilot Julius Longshore will fly it during the six-to-seven-week flight test program at Calverton. In June the plane will go the Patuxent River Naval Test Center, Maryland, for Navy evaluation.

Because of continuing electronic upgrades to the E-2C, the extra power is needed. The weight of the aircraft has gone from 48,000 pounds to nearly 54,000 pounds since the first Hawkeye went into service in 1973. Says Philbin, "These engines will provide a much needed boost to overall performance." ■

Obituaries

Richard Zotian of Final Assembly, Bethpage, Aircraft Systems, died March 28 at the age of 59. He had been with the company since 1974 and resided at 71 Lafayette Rd., North Babylon, N.Y.

Walter Martens of ILS Production Support Management, Melville, Aircraft Systems died April 18 at the age of 59. He had been with the company since 1949 and resided at 16 Stillwater Ave., Massapequa, N.Y.

Stephen F. O'Keefe of Sub-Assemblies, Bethpage, Aircraft Systems died March 15 at the age of 27. He had been with the company since 1985 and resided at 1916 Bryant Pl., Baldwin, N.Y.

Retiree Obituaries

Oscar G. Bowes of 141 Monhagen Ave., Middletown, N.Y. died Feb. 18, 1986. He retired in 1964.

Eugene F. Cummings of 15502 Banana Tree Ct., Lutz, Florida, died April 11, 1986. He retired in 1977.

Russell DePuy of 27826 Temple Terrace SE, Bonita Springs, Florida, died April 14, 1986. He retired in 1976.

Jack F. Devine of 146 BU Bldg., Cedar Gardens, Natick, Massachusetts, died July 26, 1985. He retired in 1983.

Smith C. Gale of 1062 SW 32nd St., Palm City, Florida, died April 9, 1986. He retired in 1981.

Paul A. Golka of 235 Wyandanch Rd., Sayville, N.Y., died April 11, 1986. He retired in 1976.

Kenneth G. Johnson of 17 Radial La., Levittown, N.Y., died April 17, 1986. He retired in 1977.

Onofrio Longo of 34 South Gate, Hicksville, N.Y. died April 15, 1986. He retired in 1980.

Michael Meley of 28 Henry Pl., Islip, N.Y., died April 14, 1986. He retired in 1986.

Edward G. Morgenegg of 2 Hanson Pl., Huntington, N.Y., died April 16, 1986. He retired in 1976.

John Pogoryelski of 2215 80th St., Brooklyn, N.Y., died April 7, 1986. He retired in 1972.

Frank A. Portoghese of 134 Hammett Acres, Anderson, South Carolina died April 11, 1986. He retired in 1978.

Mary G. Sabine of Rt. 9, Box 567 of Stafford, Virgina died April 8, 1986. She retired in 1973.

Irving Schneidkraut of 64 Melville Rd., Farmingdale, N.Y., died April 14, 1986. He retired in 1982.

Eric Steentofte of 2818 Plum Court, Kokomo, Indiana, died March 21, 1986. He retired in 1967.

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Breathe Deep, Bob. *Bob Fitzpatrick (R), vice president of Product Integrity and Environmental Protection, tests his carbon monoxide level at the Grumman Health Fair. The test was administered by Leuren Lowell, a volunteer with the American Lung Association of Nassau/Suffolk.*

Fair Spurs Healthy Interest

Over 1,400 people had the opportunity to become better informed about health issues by attending Grumman's first Health Fair last month.

Sponsored by Grumman's Medical Department, the fair was held on April 21, 22 and 23 in corporate headquarters. Representatives from 40 organizations provided information on a variety of health-related topics, ranging from diabetes to high blood pressure.

Fair attendees stopped at various booths where they picked up booklets and flyers, watched short films or talked to volunteers.

"If you have a particular interest in a health topic, you could definitely find the answers here," said Mariann Driscoll, a secretary for Engineering Services, Aircraft Systems.

Grumman held two raffles for complete physicals to be conducted by a Medical Department staff physician. Each physical includes a hearing test, blood profile, electrocardiogram and a stress test. The winners of the drawing were Isabel Comis of Secretarial Services, Aircraft Systems; and Franklin Bonitto, Grumman International's manager of defense programs.

From Start To Finish. *Ken Smith, senior final assembly installer in Flight Controls, assembles a C-2A nose landing gear in Building 1, Bethpage. He is working on a Cleveland Pneumatic strut. Other components are brought from vendors or built at Grumman. Smith, a 36-year Grummanite, also helps install the landing gear and gear doors onto the Greyhound and then checks to make sure everything works perfectly. (Photo by Bob Settles)*

Super OV-1 Flights Heat Up

The air has been thick and heavy at Paso Robles, an airfield near Edwards Air Force Base in California. But that hasn't stopped a souped-up OV-1D Mohawk from showing its mettle.

The Grumman Mohawk was re-engined with two modified Avco Lycoming powerplants as part of an Army project to develop and test a more powerful engine for the OV-1D and the RV-1D. The new 1800-horse power engines give the plane an additional 800 horsepower boost over the older engines.

As of April 23, the re-engined OV-1D had completed seven flights in an accelerated effort to collect a large amount of flight data. However, that data has not been analyzed yet.

Two more flight tests were scheduled for the week of April 21; then, the plane was to return to Edwards for additional tests.

The Army currently has 127 Mohawks which are used for battlefield surveillance and reconnaissance. Earlier this year the re-engined Mohawk flew seven flawless flights at Grumman's Stuart, Florida, facility, before it was delivered to Edwards on March 21 for a two-month flight test program.

Depending on the outcome of the test program, these new engines could become part of a Mohawk block improvement, which could mean six or more years of Mohawk work for Stuart. ■

View From The Cockpit. *Grumman test pilot Chris Wold (R) flew five of the seven Stuart flights of the re-engined Mohawk; Chief Warrant Officer Joe Meiss worked the stick for the other two. The telemetric data from their flights is being analyzed at Calverton.*

Data Systems Helping Navy Design Futuristic Factory

Navy-built parts will be produced 10 times faster than today's rate, thanks to a new computer-integrated manufacturing facility being developed in part by Grumman.

The Data Systems Division is one of six contractors selected by the Navy to participate in the Rapid Acquisition of Manufactured Parts (RAMP) program. Grumman's piece of the pie could be worth as much as $18-$20 million over a five-year period.

The six team members are working for the Navy through the American Manufacturing Research Consortium, a subsidiary of the South Carolina Research Authority (SCRA). SCRA will provide one of its buildings in Charleston, South Carolina, for the RAMP project.

The program is aimed at developing a computerized and robotic facility which will make small mechanical parts and printed wiring assemblies at high speed. It now takes the Navy 300 days from the time a piece is ordered to the time it is used. With RAMP in full swing by early 1988, it will take 30 days.

As a consortium member, Data Systems will be responsible for the software engineering, selection of computer hardware, and computer networks within the facility.

"Grumman was selected by the Navy because of its software and computer networking expertise," says Data Systems Senior Vice President Gerry Sandler.

Three Data Systems employees departed for Charleston on Monday, May 5, to begin working on RAMP. Grumman will hire two additional employees in South Carolina. "As many as 50 Grumman employees over the course of the five-year program will be working on the new technology," says Jim Austin, RAMP program director. "New employees will be hired in South Carolina and others transferred from Long Island."

Consortium members are: the Arthur D. Little Corp., Dynamics Research Corp., Ingersoll Engineers, SRI International, and the Battelle Memorial Institute. ■

Next Edition-
Grumman World
May 23

The Right Chemistry: Safety Heads Off Hazards

"That cigarette you're holding better not be lit," shouts Galen Becker at a middle-aged man walking past a paint room in Bethpage's Building 3. Fortunately, it's not.

Becker's not an antismoking crusader — he is the safety representative for a number of Bethpage manufacturing plants. On the other side of double doors, Mike Kienle is hard at work painting the inside of an F-14 wing bright red. The paint is extremely flammable.

Kienle's work area is a good example of the elaborate steps the company takes to guard against chemical hazards. The doors have fiberglass filters for windows, and directly outside the entrance is a powerful fan. On the opposite side of the room is an equally powerful exhaust fan and a waterfall.

There are 3,000 potentially hazardous chemicals in active use at Grumman.

This system draws airborne paint particles into the water. Kienle also must don a respirator, goggles, a white body suit, and gloves when he's painting.

Kienle has been a spray painter for 12 years, the last four at Grumman. "I last worked in a shipyard, and they were more lax about safety," he said. "Grumman's safety rules took some getting used to. But it's good to know you're protected a lot more."

This month, several thousand Grummanites will attend safety meetings as part of an effort to raise their consciousness about chemical hazards. This has become a touchy issue in the past decade, and the subject of increasingly stringent regulations.

"However, at Grumman, good safety policy is not only a act of governmental compliance," says Joe Kingfield, vice president, Corporate Quality and Safety Operations. "It's a management commitment. At Grumman, our people are our most important asset."

In Grumman's view, a healthy work force is a satisfied and productive work force.

There are some 3,000 potentially hazardous chemicals in active use at Grumman — from caustics that make parts corrosion-resistant, to epoxies used in making composites, to the paint used on a Grumman Olson truck.

A new Federal Occupational Safety and Health Administration (OSHA) rule requires manufacturers and users of potentially dangerous chemicals to create hazard communication programs. The meetings that are being held this month are part of this new program. Grummanites from manufacturing areas will be required to attend these each year to stay up-to-date on chemical hazards and protective measures.

Charging It. *In Bethpage's Building 3, Jose Caballero does cadmium plating on machine bushing holes. In this process, he applies a solution with a brush, and an electric charge bonds it to the hole's surface. It entails some risk, so Caballero dons a face shield, apron and gloves for protection.*

Grummanites who work with hazardous chemicals will attend a second training session whenever they are transferred to a hazardous area, or when a new chemical is introduced. They'll be briefed on chemicals they will work with, hazards, protective measures, and what to do in an accident or emergency.

But for Grumman, most of what's covered by the new program is old hat. Grumman has long required employees to wear safety glasses, earplugs, respirators, and other protective equipment when doing hazardous work. Several years ago, it also began working aggressively to prevent health problems which result from exposure to toxins such as chemicals.

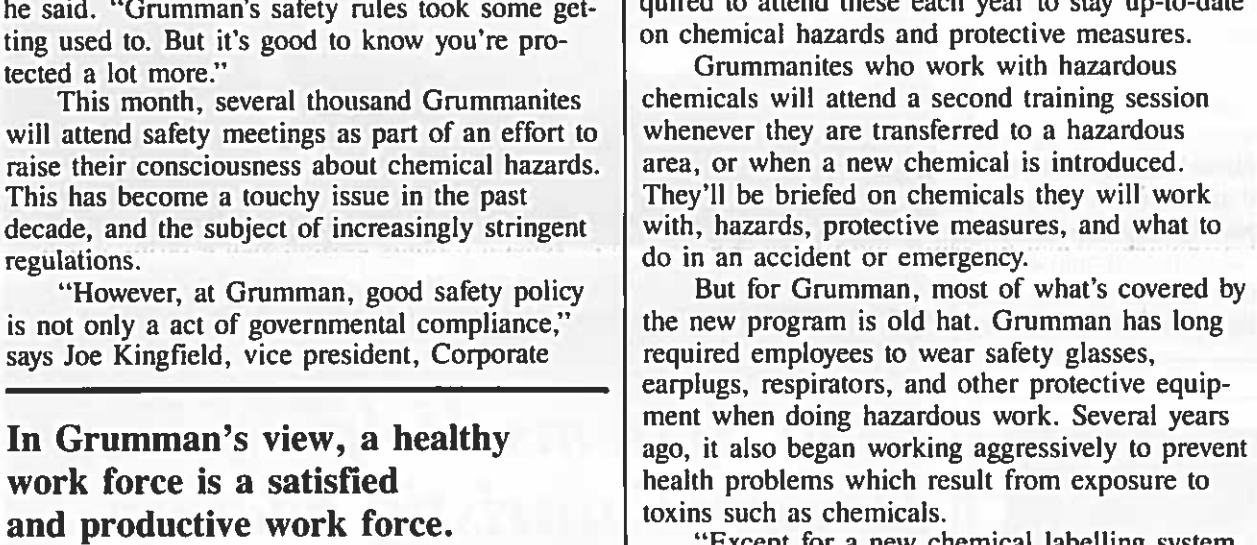
"Except for a new chemical labelling system, what's included in Grumman's new hazard communication program has been done for years," explains Greg Kash, senior industrial hygienist. "We anticipated this new OSHA rule, so we're ahead of the game when it comes to complying with it."

These new chemical labels bear the Grumman part number, if any, a description of a chemical's use, and its trade name. Labels also use a color-coded, numerical "hazard severity index."

On a zero to four scale, chemicals' health hazard (blue), flammability (red) and reactivity (yellow) are rated. ("Reactivity" refers to a chemical's stability under conditions such as heat, fire, or mixing with water.) A blue "0" means a chemical poses no significant risk to health, while a blue "4" indicates a life threatening hazard — "major or permanent damage may result from single or repeated exposures," warns the explanatory poster.

The labels will list which hazard-grams the employee must read before handling a chemical. These are pocket-size cards with safety precautions and emergency procedures for 15 types of hazards.

As an added safety measure, the employee must fill out a substance authorization card when obtaining a chemical from a place such as a supply room.



Art And Craft. *Above, Mike Kienle paints part of an F-14 wing, wearing a respirator, suit, gloves, and goggles. An air circulation system directs airborne paint particles into the waterfall behind him. Right, Bunnie Madden wears goggles and gloves while operating a silkscreen machine to produce Grumman promotional decals. Due to acrylic paint fumes, a ventilator is directly over the machine.*

Spray And Wash. *Above, Bob Reed strips paint off an aircraft detail part with a caustic solution. He protects himself with an apron, face shield, and gloves. Above left, Rose Dailey wears a respirator to run a photo-etching machine, which produces metal plates that are affixed to planes. (Photos by Bob Settles)*

Grumman's Industrial Safety and Hygiene crew includes safety engineers, industrial hygienists, technicians, safety representatives at manufacturing plants, data specialists, and support people. It's their job to keep Grummanites safe and healthy, and they're quite good at it.

Grumman had a lost-time injury rate of 2.9 per 100 employees for 1984. That compares to a rate of 4.0 reported by the Bureau of Labor Statistics for transportation manufacturers in that same year. (The Bureau puts out its report each August, so its 1985 figures aren't yet available. The 1985 Grumman lost time incidence rate is 3.3.)

When a hazard is suspected, a plant safety rep is called in and, if an evaluation is needed, the industrial hygienist. This may mean equipping the employee with a dosimeter — dosage measuring device — to measure the concentration of a toxin in the person's breathing zone.

However, Grumman aims to prevent such a situation. Before a chemical compound, solvent, paint, or other substance even goes into use, Safety and Hygiene checks it out and makes up a set of usage guidelines. And some substances do get ruled out.

Training is probably the most vital part of Grumman's safety program. Grumman's skills certification program measures a person's job qualifications — which includes safety awareness for those seeking jobs in hazard-prone areas.

It's ultimately the individual's responsibility to follow company safety rules. "One of the unfortunate after effects of the '60s is that people tend to be suspicious of companies' efforts to help them," says Industrial Hygienist Lenore Mavleos. "We are there to protect them, but people must take the initiative to use the correct protective equipment."

The department keeps on file *material safety data sheets* telling what's in substances, amounts and proportions, illnesses a user can expect from improper use, and safety measures. It has long been Grumman's policy to provide this information to the employee. Industrial Safety and Hygiene keeps this data up to date with new scientific evidence and regulations.

"We have to be up on these developments," says Mavleos. "We can't depend on the manufacturer to provide the latest information."

There is an old saying that goes, "when you've got your health, you've got everything." In Grumman's view, a healthy work force is a satisfied and productive work force. And ideally, Grummanites will bring safety awareness home with them.

Mike Kienle considers himself fairly health-conscious. After hours, when he's at home painting a friend's car, for example, he takes the same safety precautions as at work.

"It doesn't make sense to take off your respirator as soon as someone isn't there to tell you to use it," he says. "You have to be motivated. If you don't want to take care of your own health, well, nobody's going to be able to help you."■

Getting The Facts About OSHA Rules

Over 100 safety people from facilities coast-to-coast were briefed on chemical safety at the second annual Corporate Health and Safety Conference. The conference was held April 22 and 23 at Grumman Headquarters.

The main item of business: a communication program about chemical hazards that has been set up to comply with a new Federal Occupational Safety and Health Administration (OSHA) regulation. It encompasses: labeling and listing all hazardous chemicals used by Grumman; training employees in the hazards and safe handling of specific chemicals; providing information from material safety data sheets to employees; and notification of contractors of chemical hazards.

The program covers every Grumman site, division, and operating unit nationwide. Bob Fitzpatrick, Grumman vice president-Product Integrity and Environmental Protection, noted that both suppliers and users of potentially dangerous chemicals must be vigilant about precautions.

"We're not telling you how to do everything, but what the end result must be," Fitzpatrick said, noting that the communication program can be tailored to local needs.

Jim Spencer, Grumman's director of Industrial Safety and Hygiene, pointed out that while the program complies with OSHA, it doesn't take into account state and local rules. "We're there to help you on those rules also," he said.

While most of the hazard communication program has been in existence for awhile, one part that's new is the labelling system. The new Grumman label will be affixed to containers when adequate ones aren't supplied by the manufacturer, or when materials are repackaged in-house. Off-Long Island buildings can send lists of their chemicals to Industrial Safety and Hygiene. Its staff will rate the chemicals and provide information needed to make up the labels.

Grumman is now including a request for proper labelling and material safety data sheets in all its purchase agreements.

Safety and Hygiene can also produce computerized reports on a Grumman facility's safety record. Examples include monthly and quarterly compensation reports, with accident descriptions, ages, and work days lost.

Quizzing The Pros

It seems OSHA is springing this on us all at once. When must the training be given?

The OSHA deadline for the *general* training is May 25. Specialized training may be given after that date. This OSHA rule has been held up by court litigation for years. It's not really new.

How do we keep records of employee training?

All employees who complete the general training session sign a form, which is filed with Industrial Safety and Hygiene. Similarly, a form must be signed by the employee, his or her supervisor, and building safety representative as proof of training for a specific chemical hazard — and a separate form must be signed for each training session.

What type of medical services are given to employees who wear respiratory-protection equipment?

As part of its skills certification procedures, Grumman obtains a medical history every two years from employees who wear dust respirators in doing their jobs. If indicated, it may obtain a medical exam and a test with a spirometer — an instrument that measures the breathing capacity of the lungs. Those who wear negative-pressure and air-supplied respirators *must* be tested with a spirometer.

All these tests are given sooner if a health problem develops that may interfere with the employee wearing respiratory protection.

On Long Island, the tests are conducted by the Medical Department in Headquarters. Off Long Island, the tests are conducted by the building physician, or the employee is sent to an outside physician.

Are the same services available to job shoppers?

No. The company's liability insurance does not cover job shoppers, except for assistance in an emergency. Agencies that furnish us with job shoppers are required to conduct the skills certification — which includes these respiratory tests. Grumman now requires departments that hire job shoppers to specify this.

If you would like more information about chemical safety, help is available. Just call Industrial Safety and Hygiene at Ext. (111) 53193; (516) 575-3193 from outside the main Grumman phone system.

Grumman 101: London Scholars' Real-Life Research

"There's a tremendous esprit d'corps at Grumman," said John Taylor recently, in the accent known as Oxford English.

Taylor is a master of business adminstration student from London Business School in England. He and five other London MBA students came to Grumman recently to do research.

The assignment: should Grumman's Space Systems Division pursue the European space market? In addition to financial and scientific facts, the group gave equal attention to the Grumman corporate culture in its research.

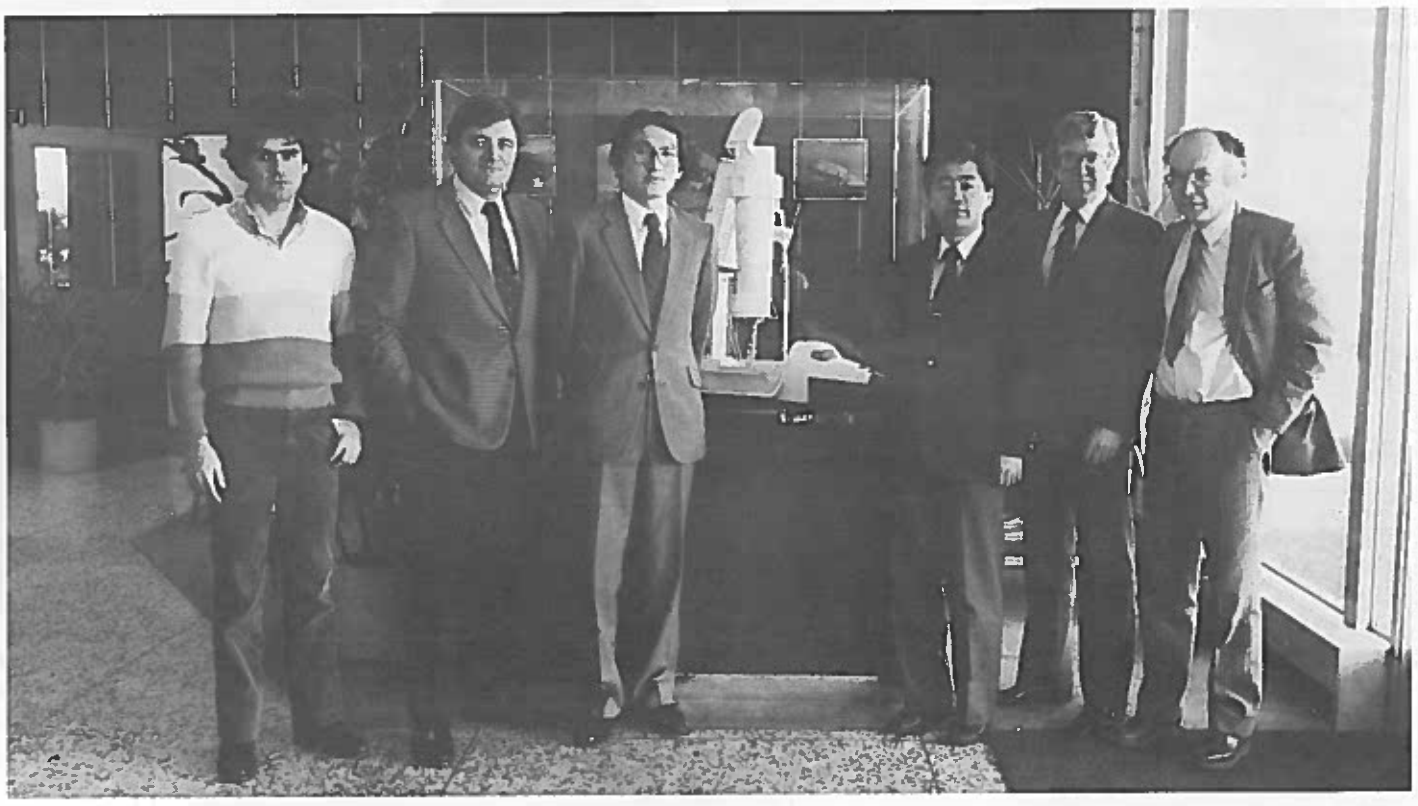
Besides Taylor, the students were Nick Phillipson, who is also from Britain; Yolchiro Yokoyama and Takeshi Hayashi, who are natives of Japan; a Dane, Ole Pedersen; and a Greek, Sakis Athanassiadis.

Grumman last hosted a London Business School study group in 1984. The program is intended for mid-career managers, and this year, six study groups travelled to America. The school solicits participating American businesses and devises business problems. Students then choose what problem — and company — they wish to study.

The Grumman students had worked in the shipping, banking, steel, construction, engineering and computer industries; none had worked for an aerospace company before. All said Grumman was their number-one study choice.

"We've all been watching space ever since Neil Armstrong walked on the moon," said Phillipson. "We see space as the finest global market."

Their "classes" were briefings by Grummanites on such subjects as: Space Systems Division projects, the future of NASA, the Strategic Defense Initiative, and Grumman's marketing and development programs.



Company As Classroom. *Six London Business School MBA students recently spend two weeks doing research at Grumman. They are (L to R) Sikas Athanassiadis, Ole Pedersen, Yolchiro Yokoyama, Takeshi Hayashi, John Taylor, and Nick Phillipson. (Photo by Marie Trimborn)*

So, should Grumman's Space Systems Division pursue the European space market? In a presentation to Grumman management, the team's conclusion was a qualified "yes."

The business opportunities they cited are in future Strategic Defense Initiative (SDI) work. Britain has already signed an accord with the U.S. to support SDI research, and Germany is expected to sign one soon.

Less attractive, the students decided, is Europe's market for satellites and spacecraft. The European Space Agency already has contracts with European companies, and funding is locked in by five-year plans.

The hands-on nature of the assignment gave the students a chance to observe Grumman at work. "It's far less formal than in Britain," said Phillipson. "The company cultivates friendliness. The word 'unique' is a dangerous word, but I would call this a unique accomplishment — which results in high employee commitment."

The informal atmosphere benefitted the group's research. "We were impressed with people's frankness in discussing business with us," said Pedersen. "We appreciate that."

Hayashi noted similarities between this and the group dynamics for which Japanese companies are renowned. He said "lifetime Japanese employment" is a misconception, since only large companies there boast high longevity.

The Grummanites who worked with the students enjoyed the experience, too. "They brought a Eurasian perspective to discussions," said Bob Rennie, director, Advanced Space Technology. "They are very astute regarding European political realities — the close cooperation that must be achieved between many different groups."

Grumman is already acting upon the group's recommendations to send a Space Systems Division team to England. This team will assess what role British industry could play on future Grumman SDI contracts. ■

Heave, Ho. *In Calverton, (L to R) Jim Simms, Richard Redding, Richard Milligan, and leadman John Anden recently slid a new General Electric F110 engine under the engine bay. This was a test to see if the engine can be installed this way. F-14 engines are usually installed from the rear, but that requires lots of space on the normally crowded hangar deck of a carrier. (Photo by Jim Wagner)*

Unit Values

The Grumman Employee Investment Plan has reported the following unit values as of March 31 (compared to February 28):

Equity Fund
3.672 up from 3.513

Fixed Income Fund
5.35 up from 5.216

Guaranteed Income Fund
2.22 up from 2.2

Company Stock Fund
$27.19 up from $24.88

Note: It usually takes several weeks to formulate these values. EIP members can call Ext. (111) 54400 (outside Grumman, call 516-575-4400), for a recorded message which is made as soon as the new unit values are available.

Real Cookie Monsters. *Lt. Jeff Howlett (2nd L) got results. He placed the 'Send Cookies' sign in the EA-6B canopy. Literally tons of cookies were mailed to his squadron, 'The Rooks' of VAQ-137, deployed in the Mediterranean aboard the U.S. Saratoga. Helping open the boxes of cookies were: (L to R) Capt. J. Unruh, skipper of the 'Sara'; Lt. Alex Kay; Cdr. Dan Roper; Cdr. Mike Bender, and Cdr. Roy Christian.*

Great Cookie Caper Of '86: Care Packages From States Keep Fleet's Tummies Full

Remember the photo of an EA-6B with a "Send Cookies" sign posted on the side window?

Besides running in *Grumman World*, it was published in newspapers across the country. Grumman field rep Ron Payne reports that Americans got the message and sailors aboard the carriers *Coral Sea* and *Saratoga* and other ships got the cookies – literally tons of them.

The "Great Cookie Caper of '86" was instigated by the "Rooks" of VAQ-137 – the first squadron to be deployed with the new Grumman ICAP-II Prowlers. The squadron recently returned to the States after being deployed eight months aboard the U.S.S. Saratoga.

While operating in the Mediterranean near the coast of Libya, the Rooks got word that a P-3 Orion loaded with photographers would be flying toward their carrier. Unable to pass up the chance to have a little fun, they made two signs: "Hi, Mom" and "Send Cookies." The sign-carrying Prowler pulled alongside the P-3. The message to "Send Cookies" hit the U.S. newspapers a few days later. Before long, the "Rooks" were bombarded with cookies.

"The Winn-Dixie chain in Florida, which makes their own cookies, sent two tons of them," says Payne. "A woman in San Diego who runs a cookie store sent 50 pounds."

Payne says that many sailors whose hometown papers published the picture got cookies from people in their communities. "When you got mail call, it was always cookies," says Payne.

Grummanites also took the time to whip up batches of their special recipes and sent them to Payne to distribute among the men of VAQ-137 and other squadrons. He and the three other Grumman reps aboard the *Saratoga* – Craig Foster, Rus Hardwick and Dorsey Hoard – tried some, too.

What may have been the biggest single batch from Grummanites was the 70 pounds sent from Milledgeville Operations in Georgia. Vita D'Ambrosio collected the cookies and shipped them to the sailors of VAQ-137.

D'Ambrosio was touched by the response of the men aboard the Saratoga. The commanding officer of VAQ-137 wrote and sent her a picture of the entire squadron. "You could see how lonely guys get when they go away from home," she says.

Another thank you note came from Lt. Richard DuBois, who wrote, "It helps those long dreary days of cruise go by when you know that there are some people back home that really do care and remember us out here."

Writing when the carrier was off the coast of Algeria on its way home, DuBois said, "Eight months have certainly taught all 5,400 of us aboard 'Sara' how much our country has to offer, and it's people like yourselves that make it ever more special." ■

Grumman Grant Provides Senior Citizens Peace Of Mind

Islip Town uses donation to buy emergency response devices

A special $2,245 grant from Grumman has enabled five senior citizens in the Town of Islip (L.I.) to lead safer lives. In each of their homes, a state-of-the-art emergency response system called the "Voice of Help" has been installed.

The device provides the user 24-hour emergency assistance through the telephone wires. It doesn't require dialing and it even works if the telephone is off the hook.

The handy device is kept in the user's pocket, or around the neck or wrist. When help is needed, the person presses the button and an emergency signal is instantly transmitted to the American Medical Alert Corp.'s monitoring station in Oceanside.

A trained emergency crew member answers the call within seconds. Using the device, the person in need and the crew member can talk directly to each other. Meanwhile, the user's name and personal emergency information flash on a computer screen and appropriate emergency aid is dispatched. At the same time, relatives and neighbors are alerted so that they can respond, too.

Prior to requesting the Grumman grant, the Town of Islip Senior Citizen Center determined the number of senior citizens who qualified for the unit. Each of the six selected (one senior is waiting for a machine) are over 60, live alone and are under medical treatment – primarily for a heart condition.

"Every person using the device has stressed a sense of security – plus, family members feel much better," says Ruth Joldersman, director of the Islip Senior Citizen Center. "It's the wave of the future for seniors."

The "Voice of Help" was just one project funded in 1985 by Grumman, through the recommendation of its Employee Contribution Council. Made up of 12 Grummanites, the council was formed nine years ago to help determine which community, charitable and cultural organizations should receive corporate funds.

Last year, the council recommended corporate support of 10 programs for the aging and 10 world hunger causes.

Following a request by the Town of Islip for six "Voice of Help" units, the council investigated the need for this sophisticated device. "The council agreed that the device would be a great asset to the sick elderly. The 'Voice of Help' units were installed two months ago and so far the users are pleased with them," says Sharon Grosser, manager of Grumman's Community Support Programs.

The grant includes the purchase of six units at $449 each. After a six month trial period, the Islip Senior Citizen Center determines if the user has a permanent need for the device. If not, the unit will be leased to another senior citizen who meets the qualifications. In addition, the center installs the devices free of charge.

The "Voice of Help" has been marketed throughout the United States for five years. There are 6,000 units currently in use in the nation.

In a related area, the Grumman Employee Contribution Council recently awarded a $2,000 grant to Doubleday Babcock Senior Citizen Center in Oyster Bay, L.I. Requested by the Town of Oyster Bay, this project helps seniors with hearing problems. Six hearing devices are being used by the severely hearing-impaired at the center's senior citizen meetings. ■

Personals

My family and I wish to express our sincere thanks and appreciation for the thoughtfulness expressed by my friends, co-workers and ESO during the recent loss of my mother. **Ed Calhoun**

Many thanks to my friends, co-workers and ESO for their expressions of sympathy following the recent loss of my father. **Jim Jehle**

My family and I wish to thank all our friends and ESO for their kind expressions of sympathy during the recent loss of my mother. **Ray Siefert and Family**

My family and I want to thank all of our friends and ESO for their kind and heartfelt expressions of sympathy and condolences when my father passed away. **Frank Pollio**

We would like to thank everyone in Grumman who shared our mourning and grief in the tragic loss of our daughter Leslie E. Grgas. **Paul and Alice Grgas**

The family of Steve Kerekes would like to thank everyone for their kindness, love and prayers at a time of deep sorrow in our lives. Your thoughtfulness and friendship has been most helpful in carrying us through this terrible time. You will always be in our hearts and prayers. **Anna Kerekes**

My family and I would like to thank all my co-workers and ESO for their kind expressions of sympathy during the recent loss of my mother. **Stan Wong**

My family and I would like to extend our sincere thanks to my co-workers and ESO for their comforting expressions of sympathy during the recent loss of my mother. **Charlie Spar**

I wish to thank all my co-workers, friends and ESO for their expressions of sympathy during the recent loss of my mother. **Sal Tranchina**

I would like to thank all my friends at Grumman who helped make my retirement party such a memorable occasion. I shall miss all of you. **Paul Henton**

Retirees

On behalf of our fellow workers, *Grumman World* salutes the following Grummanites for their contributions to the company and wishes them well in their retirement. Those who have recently retired are:

Edward G. Kingfield (30), Frank Jagiello (1), Scott J. Goebel (15), John Tarr (111), William R. Berkley (118), Mason O. Mosley (280), James T. Tambini (5), Erma M. Duryea (40), Joseph C. Supper (2), Joseph F. Pirola Jr. (5), Leland E. Young (6), Jack C. Combs (1), Samuel Gelman (14), William H. Whelan (2), Donald Burden (4), William J. Bartoszak (4), Robert J. Jump (17), Charles A. Prudhom (2), Emily H. Goodman (25), Anthony T. Spinelli (25), Joseph P. Callahan Jr. (7), Edward J. Cassidy (3), Frank DeGatino (2), Armand A. Jalbert (2), Oscar W. Haines Jr. (10), Virginia G. Morrison (30), Alfred C. Middleton (2), Peter Wladyka (2), James Edwards (4), Albert J. Turner (2), Carmine Albano (2), Aaron Golden (12), August Lopes (2), Margaret R. Grenfell (1), Paul Henton (5), Gordon W. Nelling (2), Donald L. Howell (112), Sonia E. Dann (24), Cosimo Franchino (2), David L. Sweezy (1), Emma Sweezy (1).

GrummanWorld
May 9, 1986

(Photo by Larry Van Wallendael)

E-2C Salutes Miss Liberty

There is plenty to celebrate this year. On the Fourth of July, over a million people will be on hand for the Statue of Liberty's 100th anniversary party in the New York City Harbor.

In 1986, Naval aviation celebrates its 75th anniversary. For 56 of those years, Grumman has supplied a variety of planes and equipment to the U.S. Navy — such as this E-2C Hawkeye.

A new, more powerful engine is on tap for the Hawkeye. Flight testing has already begun at Calverton. See story on page 2.

Letters

Dear Editor,

With full realization of the problems that have already been created in the workplace by the smoking issue, I would appreciate knowing when smoking is going to be prohibited in the office.

We are a small cramped office of 15 people with six smokers. Because a smoking area has not been designated they smoke at their desks all day long. This is not a subject for negotiation because of the militant feelings on both sides.

What can be done?

Aircraft Systems
Bethpage

The first thing you should do is talk with your supervisor about the problem. If that is unsuccessful, call Personnel Relations – Ext. 54357 when calling from Bethpage. They can usually intercede without revealing your identity. Under the first set of regulations, which went into effect in November 1984, you and the other non-smokers in your office could possibly be grouped in one part of the room, and you can designate this a no smoking area.

However, the new regulation that was passed in Nassau County effective in February is one of the stiffest in the nation. Good news for you, bad news for your smoking co-workers, and, frankly, a big problem for most employers. Under these guidelines, smoking is banned in the workplace altogether, except for special smoking areas that the employer may set up. Grumman is currently operating under a grace period for compliance with the Nassau County ordinance; we expect to be in full compliance within the next few months. As a result, most employees will have to get used to smoking a lot less during working hours.

We wish our people didn't smoke because we believe it's bad for them. We all know that it's not impossible to stop smoking – but it's not easy, either. Grumman will continue to encourage smokers to quit the habit, and to hold smoking cessation programs for those ready to give it a try.

Bob Bradshaw
Vice president and secretary
Grumman Corporation

Let Us Know

We don't want to do all the talking.

We'd like to know what you think about the things you see in these pages, and what you see going on in the company. Serious comments, questions and complaints are welcomed, and will be answered by the people most qualified to respond. We'll get back to you promptly with their replies. If the topic is of general interest, we'll print it.

Letters to the editor should be addressed to *Grumman World*, 1111 Stewart Avenue, A22-GHQ, Bethpage, N.Y. 11714, and should include your name and address. Letters may be edited for clarity or space.

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